Project Title	Funding	Strategic Plan Objective	Institution
Dysregulation of mTOR signaling in fragile X syndrome	$467,760	Q2.S.D	Albert Einstein College of Medicine of Yeshiva University
Modeling 5-HT-absorbing neurons in neuropathology of autism	$200,400	Q2.Other	Albert Einstein College of Medicine of Yeshiva University
Monoallelic expression in neurons derived from induced pluripotent stem cells	$404,100	Q2.Other	Albert Einstein College of Medicine of Yeshiva University
TMLHE deficiency and a carnitine hypothesis for autism	$60,000	Q2.S.D	Baylor College of Medicine
The role of the new mTOR complex, mTORC2, in autism spectrum disorders	$0	Q2.Other	Baylor College of Medicine
Motor cortex plasticity in MeCP2 duplication syndrome	$125,000	Q2.S.D	Baylor College of Medicine
Neurobiology of aggression co-morbidity in mouse model of idic15 autism	$261,000	Q2.S.E	Beth Israel Deaconess Medical Center
Neurobiological mechanism of 15q11-13 duplication autism spectrum disorder	$367,304	Q2.S.D	Beth Israel Deaconess Medical Center
A cerebellar mutant for investigating mechanisms of autism in Tuberous Sclerosis	$149,967	Q2.S.D	Boston Children's Hospital
Probing synaptic receptor composition in mouse models of autism	$249,995	Q2.S.D	Boston Children's Hospital
Mechanisms Underlying the Cerebellar Contribution to Autism in Mouse Models of Tu	$190,458	Q2.S.D	Boston Children's Hospital
MRI biomarkers of patients with tuberous sclerosis complex and autism	$720,276	Q2.S.D	Boston Children's Hospital
Neuropeptide regulation of juvenile social behaviors	$14,775	Q2.Other	Boston College
Elucidating the function of class 4 semaphorins in GABAergic synapse formation	$325,130	Q2.Other	Brandeis University
Semaphorin4D and PlexinB1 mediate GABAergic synapse development in mammalian CNS	$27,814	Q2.Other	Brandeis University
Role of endosomal NHE6 in brain connectivity and autism	$62,500	Q2.Other	Brown University
Autism and the insula: Genomic and neural circuits	$0	Q2.Other	California Institute of Technology
ERK signaling in autism associated with copy number variation of 16p11.2	$0	Q2.Other	Case Western Reserve University
TrkB agonist therapy for sensorimotor dysfunction in Rett syndrome	$141,976	Q2.S.D	Case Western Reserve University
Impact of NR2B mutations on NMDA receptors and synapse formation	$60,000	Q2.Other	Case Western Reserve University
Phenotypic characterization of MECP2 mice	$64,742	Q2.S.D	Children's Hospital of Philadelphia
The PI3K Catalytic Subunit p110delta as Biomarker and Therapeutic Target in Autism and Schizophrenia	$0	Q2.Other	Cincinnati Children's Hospital Medical Center University of Cincinnati
Astrocyte function in genetic mouse models of autism spectrum disorders	$394,063	Q2.S.D	Cleveland Clinic Lerner College of Medicine, Case Western Reserve University
Social brain circuits and fever-evoked response in 16p11.2 mice	$87,500	Q2.Other	Cold Spring Harbor Laboratory

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Aberrant synaptic form and function due to TSC-mTOR-related mutation in autism spectrum disorders	$150,000	Q2.S.D	Columbia University
Role of neurexin in the amygdala and associated fear memory	$0	Q2.Other	Columbia University
Neurexin-neuroligin trans-synaptic interaction in learning and memory	$100,000	Q2.Other	Columbia University
Investigation of a possible role of the protocahderin gene cluster in autism	$150,000	Q2.Other	Columbia University
Phagocytosis is misregulated in a Drosophila model of Fragile X syndrome	$47,232	Q2.S.D	Columbia University
New approaches to local translation: SpaceSTAMP of proteins synthesized in axons	$401,927	Q2.S.D	Dana-Farber Cancer Institute
Transcriptional control of inhibitory synapse formation	$353,295	Q2.Other	Dana-Farber Cancer Institute
The impact of Pten signaling on neuronal form and function	$375,706	Q2.Other	Dartmouth College
Presynaptic Fragile X Proteins	$249,000	Q2.S.D	Drexel University
Analysis of Shank3 complete and temporal and spatial specific knockout mice	$408,192	Q2.Other	Duke University
The striatal circuitry underlying autistic-like behaviors	$31,975	Q2.Other	Duke University
Dissecting Reciprocal CNVs Associated With Autism	$0	Q2.Other	Duke University
Modulation of RhoA signaling by the mRNA binding protein hnRNPQ1	$30,912	Q2.S.D	Emory University
Molecular mechanisms of electrical synapse formation in vivo	$90,000	Q2.Other	Fred Hutchinson Cancer Research Center
Elucidation and rescue of amygdala abnormalities in the Fmr1 mutant mouse model of fragile X syndrome	$0	Q2.S.D	George Washington University
Urokinase-type plasminogen activator plasma concentration and its relationship to hepatocyte growth factor (HGF) and GABA levels in autistic children	$0	Q2.Other	Hartwick College
To Determine Epidermal growth factor (EGF) and EGF Receptor Plasma Concentration and It's Relationship to Hepatocyte Growth Factor (HGF), GABA Levels and Symptom Severity in Autistic Children	$4,500	Q2.S.A	Hartwick College
The role of UBE3A in autism	$250,001	Q2.S.D	Harvard Medical School
Protein interaction networks in autism	$62,500	Q2.Other	Harvard Medical School
A novel essential gene for human cognitive function	$47,232	Q2.S.D	Harvard Medical School
Analysis of MEF2 in cortical connectivity and autism-associated behaviors	$49,214	Q2.S.D	Harvard Medical School
Multigenic basis for autism linked to 22q13 chromosomal region	$250,000	Q2.S.D	Hunter College of the City University of New York (CUNY) jointly with Research Foundation of CUNY
Olfactory abnormalities in the modeling of Rett syndrome	$339,270	Q2.S.D	Johns Hopkins University

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Dynamic regulation of Shank3 and ASD	$604,587	Q2.Other	Johns Hopkins University
The role of the GRIP protein complex in AMPA receptor trafficking and autism spectrum disorders	$15,000	Q2.Other	Johns Hopkins University
Why are autistic females rare and severe? An approach to autism gene identification.	$28,600	Q2.S.B	Johns Hopkins University
High throughput screen for small molecule probes for neural network development	$388,800	Q2.Other	Johns Hopkins University
Role of LIN28/let-7 axis in autism	$62,500	Q2.Other	Johns Hopkins University School of Medicine
Autism phenotypes in Tuberous Sclerosis: Risk factors, features & architecture	$149,999	Q2.S.D	King's College London
Roles of miRNAs in regulation of Foxp2 and in autism	$15,000	Q2.Other	Louisiana State University
Analysis of autism linked genes in C. elegans	$62,500	Q2.Other	Massachusetts General Hospital
Retrograde synaptic signaling by Neurexin and Neuroligin in C. elegans	$125,000	Q2.Other	Massachusetts General Hospital
Molecular signatures of autism genes and the 16p11.2 deletion	$62,500	Q2.Other	Massachusetts General Hospital
Translational dysregulation in autism pathogenesis and therapy	$125,000	Q2.S.D	Massachusetts General Hospital
MicroRNAs in synaptic plasticity and behaviors relevant to autism	$131,220	Q2.S.D	Massachusetts General Hospital
Shank3 in synaptic function and autism	$385,200	Q2.Other	Massachusetts Institute of Technology
Using Drosophila to characterize the molecular pathogenesis of autism	$234,000	Q2.Other	Massachusetts Institute of Technology
Imaging signal transduction in single dendritic spines	$449,208	Q2.Other	Max Planck Florida Corporation
Perturbation of Excitatory Synapse Formation in Autism Spectrum Disorders	$0	Q2.Other	Max Planck Florida Institute for Neuroscience
Functional analysis of EPHB2 mutations in autism	$124,950	Q2.Other	McLean Hospital
Connections between autism, serotonin and hedgehog signaling	$124,401	Q2.S.D	Medical Research Council-National Institute for Medical Research
CNTNAP2 regulates production, migration and organization of cortical neurons	$62,496	Q2.Other	Memorial Sloan-Kettering Cancer Center
Role of Sema7A in functional organization of neocortex	$366,120	Q2.S.D	Mount Sinai School of Medicine
Probing the Molecular Mechanisms Underlying Autism: Examination of Dysregulated Protein Synthesis	$49,300	Q2.S.D	National Institute of Mental Health (NIH)
Dysregulation of protein synthesis in fragile X syndrome	$1,089,880	Q2.S.D	National Institutes of Health
Dysregulated Translation and Synaptic Dysfunction in Medium Spiny Neurons of Autism Model Mice	$0	Q2.Other	New York University
Translation, synchrony, and cognition	$375,588	Q2.S.D	New York University

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Interneuron subtype-specific malfunction in autism spectrum disorders	$120,000	Q2.Other	New York University School of Medicine
Regulation of cortical critical periods in a mouse model of autism	$0	Q2.S.D	Northwestern University
A family-genetic study of autism and fragile X syndrome	$593,966	Q2.S.D	Northwestern University
DISRUPTION OF TROPHIC INHIBITORY SIGNALING IN AUTISM SPECTRUM DISORDERS	$180,832	Q2.Other	Northwstern University
Neuroligin, oxidative stress and autism	$150,000	Q2.Other	Oklahoma Medical Research Foundation
Sex-Specific Gene-Environment Interactions Underlying ASD	$35,000	Q2.S.B	Rockefeller University
Dissecting neural mechanisms integrating multiple inputs in C. elegans	$477,449	Q2.Other	Salk Institute for Biological Studies
Engrailed genes and cerebellum morphology, spatial gene expression and circuitry	$451,202	Q2.Other	Sloan-Kettering Institute for Cancer Research
Revealing protein synthesis defects in fragile X syndrome with new chemical tools	$337,091	Q2.S.D	Stanford University
Function and dysfunction of neuroligins in synaptic circuits	$450,000	Q2.Other	Stanford University
Function of neurexins	$461,977	Q2.Other	Stanford University
Role of CNTNAP2 in neuronal structural development and synaptic transmission	$55,200	Q2.Other	Stanford University
Neurobiology of RAI1, the causal gene for Smith-Magenis syndrome	$62,314	Q2.S.D	Stanford University
Mesocorticolimbic dopamine circuitry in mouse models of autism	$349,295	Q2.S.D	Stanford University
Frontostriatal synaptic dysfunction in a model of autism	$52,190	Q2.Other	Stanford University
Role of neurexin in synapse formation and maintenance	$53,942	Q2.Other	Stanford University
Investigating the role of neurexin-1 mutation in autism using human induced neuro	$49,214	Q2.Other	Stanford University
Restoring cortical plasticity in a Rett mouse model	$60,000	Q2.S.D	Stanford University
NINDS comment: Disruption of Reelin biosynthesis by de novo missense mutations found in aut	$32,615	Q2.Other	State University of New York Upstate Medical Center
Mouse Model of Dup15q Syndrome	$84,253	Q2.S.D	Texas AgriLife Research
RNA dysregulation in autism	$250,000	Q2.Other	The Rockefeller University
Cell adhesion molecules in CNS development	$515,850	Q2.Other	The Scripps Research Institute - California
A stem cell based platform for identification of common defects in autism spectrum disorders	$0	Q2.S.D	The Scripps Research Institute - California
Impact of SynGAP1 mutations on synapse maturation and cognitive development	$661,570	Q2.Other	The Scripps Research Institute - Florida

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Understanding the basic neurobiology of Pitt-Hopkins syndrome	$0	Q2.S.D	The University of Alabama at Birmingham
MeCP2 modulation of BDNF signaling: Shared mechanisms of Rett and autism	$303,067	Q2.S.D	University of Alabama at Birmingham
Met signaling in neural development and circuitry formation	$230,032	Q2.Other	University of Arizona
Autism Linked LRRTM4-Heparan Sulphate Proteoglycan Complex Functions in Synapse Development	$0	Q2.S.G	University of Brtish Columbia
Inhibitory mechanisms for sensory map plasticity in cerebral cortex	$316,453	Q2.Other	University of California, Berkeley
The role of MeCP2 in Rett syndrome	$344,213	Q2.S.D	University of California, Davis
Project 4: Calcium signaling defects in autism (Pessah/Lein)	$109,730	Q2.Other	University of California, Davis
Mechanism of UBE3A imprint in neurodevelopment	$7,869	Q2.S.D	University of California, Davis
a-Actinin Regulates Postsynaptic AMPAR Targeting by Anchoring PSD-95	$0	Q2.Other	University of California, Davis
a-Actinin Regulates Postsynaptic AMPAR Targeting by Anchoring PSD-95	$0	Q2.Other	University of California, Davis Medical Center University of California, Davis
Dual modulators of GABA-A and Alpha7 nicotinic receptors for treating autism	$0	Q2.Other	University of California, Irvine
BDNF and the restoration of synaptic plasticity in fragile X and autism	$449,134	Q2.S.D	University of California, Irvine
Cortactin and spine dysfunction in fragile X	$32,875	Q2.S.D	University of California, Irvine
Investigation of sex differences associated with autism candidate gene, Cyfip1	$32,413	Q2.S.B	University of California, Los Angeles
Modeling multiple heterozygous genetic lesions in autism using Drosophila melanogaster	$201,838	Q2.Other	University of California, Los Angeles
The role of Fox-1 in neurodevelopment and autistic spectrum disorder	$145,757	Q2.S.D	University of California, Los Angeles
A functional genomic analysis of the cerebral cortex	$486,802	Q2.Other	University of California, Los Angeles
Optogenetic treatment of social behavior in autism	$385,000	Q2.Other	University of California, Los Angeles
A Role for Cytoplasmic Rbfox1/A2BP1 in Autism	$0	Q2.Other	University of California, Los Angeles
Cytoplasmic functions of Rbfox1, a candidate autism gene	$231,000	Q2.Other	University of California, Los Angeles
Kinetics of drug macromolecule complex formation	$687,969	Q2.Other	University of California, San Diego
Using fruit flies to map the network of autism-associated genes	$124,996	Q2.Other	University of California, San Diego
Characterizing the regulatory pathways and regulation of AUTS2	$0	Q2.Other	University of California, San Francisco

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A novel transplantation assay to study human PTEN ASD alleles in GABAergic interneurons	$60,000	Q2.Other	University of California, San Francisco
Role of negative regulators of FGF signaling in frontal cortex development and autism	$15,000	Q2.Other	University of California, San Francisco
Deciphering the function and regulation of AUTS2	$0	Q2.Other	University of California, San Francisco
Cerebellar plasticity and learning in a mouse model of autism	$62,500	Q2.Other	University of Chicago
Physiological studies in a human stem cell model of 15q duplication syndrome	$60,000	Q2.S.D	University of Connecticut
Beta-catenin signaling in autism spectrum disorders	$60,100	Q2.S.G	University of Illinois at Chicago
Synaptic phenotype, development, and plasticity in the fragile X mouse	$379,329	Q2.S.D	University of Illinois at Urbana Champaign
Molecular dissection of calmodulin domain functions	$310,222	Q2.Other	University of Iowa
Wnt modulation as a treatment for autism spectrum disorders	$184,568	Q2.Other	University of Iowa
Foxp2 regulation of sex specific transcriptional pathways and brain development	$88,128	Q2.S.B	University of Maryland, Baltimore
The microRNA pathway in translational regulation of neuronal development	$340,304	Q2.S.D	University of Massachusetts Medical School
Caspr2 as an autism candidate gene: A proteomic approach to function & structure	$305,280	Q2.Other	University of Medicine & Dentistry of New Jersey - Robert Wood Johnson Medical School
Investigating the Role of RBFOX1 in Autism Etiology	$0	Q2.Other	University of Miami
Novel candidate mechanisms of fragile X syndrome	$249,000	Q2.S.D	University of Michigan
Molecular mechanisms of the synaptic organizer alpha-neurexin	$373,200	Q2.Other	University of Michigan
Matrix metalloproteinases expression in autism spectrum disorders	$15,000	Q2.Other	University of Naples
A Novel Glial Specific Isoform of Cdkl5: Implications for the Pathology of Autism in Rett Syndrome	$0	Q2.S.D	University of Nebraska Medical Center
Modeling Pitt-Hopkins Syndrome, an Autism Spectrum Disorder, in Transgenic Mice Harboring a Pathogenic Dominant Negative Mutation in TCF4	$0	Q2.S.D	University of North Carolina, Chapel Hill
Functional and anatomical recovery of synaptic deficits in a mouse model of Angelman Syndrome	$58,000	Q2.S.D	University of North Carolina at Chapel Hill
Bi-directional regulation of Ube3a stability by cyclic AMP-dependent kinase	$60,000	Q2.S.D	University of North Carolina at Chapel Hill
Regulation of spine morphogenesis by NrCAM	$213,120	Q2.Other	University of North Carolina at Chapel Hill
Effect of paternal age on mutational burden and behavior in mice	$177,600	Q2.Other	University of North Carolina at Chapel Hill
RNA expression at human fragile X synapses	$59,217	Q2.S.D	University of North Carolina at Chapel Hill and North Carolina State University

Project Title	Funding	Strategic Plan Objective	Institution
The role of genetics in communication deficits in autism spectrum disorders	$0	Q2.S.D	University of Pennsylvania
Transcriptional responsiveness in lymphoblastoid cell lines	$0	Q2.Other	University of Pennsylvania
Engrailed targets and the control of synaptic circuits in Drosophila	$361,875	Q2.Other	University of Puerto Rico Medical Sciences Campus
Biology of non-coding RNAs associated with psychiatric disorders	$430,144	Q2.Other	University of Southern California
Function and structure adaptations in forebrain development	$520,098	Q2.Other	University of Southern California
Genetic studies of autism-related Drosophila neurexin and neuroligin	$175,802	Q2.Other	University of Texas Health Science Center, San Antonio
Investigation of protocadherin-10 in MEF2- and FMRP-mediated synapse elimination	$55,670	Q2.S.D	University of Texas Southwestern Medical Center
Mechanisms of synapse elimination by autism-linked genes	$240,115	Q2.S.D	University of Texas Southwestern Medical Center
Mechanisms of mGluR5 function and dysfunction in mouse autism models	$393,841	Q2.S.D	University of Texas Southwestern Medical Center
Role of MEF2 and neural activity in cortical synaptic weakening and elimination	$415,385	Q2.S.D	University of Texas Southwestern Medical Center
Translational regulation of adult neural stem cells	$359,977	Q2.S.D	University of Wisconsin - Madison
Macrocephalic autism: Exploring and exploiting the role of PTEN	$0	Q2.Other	University of Wisconsin - Madison
Fragile X syndrome target analysis and its contribution to autism	$259,025	Q2.S.D	Vanderbilt University
Genetic and developmental analyses of fragile X mental retardation protein	$378,771	Q2.S.D	Vanderbilt University Medical Center
mTOR modulation of myelination	$178,659	Q2.S.D	Vanderbilt University Medical Center
Role of neuronal migration genes in synaptogenesis and plasticity	$53,942	Q2.Other	Weill Cornell Medical College
High metabolic demand of fast-spiking cortical interneurons underlying the etiology of autism	$56,000	Q2.Other	Weill Cornell Medical College
Pathogenic roles of paternal-age-associated mutations in autism	$62,500	Q2.Other	Weill Cornell Medical College
Genetic model to study the ASD-associated gene A2BP1 and its target PAC1	$125,000	Q2.Other	Weizmann Institute of Science
Studying Rett and Fragile X syndrome in human ES cells using TALEN technology	$30,000	Q2.S.D	Whitehead Institute for Biomedical Research
Genetically defined stem cell models of Rett and fragile X syndrome	$350,000	Q2.S.D	Whitehead Institute for Biomedical Research
Allelic choice in Rett syndrome	$374,862	Q2.S.D	Winifred Masterson Burke Medical Research Institute

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Morphogenesis and function of the cerebral cortex	$393,228	Q2.Other	Yale University
Functional analysis of EPHB2 mutations in autism - Project 1	$89,633	Q2.Other	Yale University
Identification of candidate genes at the synapse in autism spectrum disorders	$168,245	Q2.S.G	Yale University
Role of major vault protein in autism	$0	Q2.Other	Yale University
Functional analysis of EFR3A mutations associated with autism	$62,500	Q2.Other	Yale University
Pleiotropic roles of dyslexia genes in neurodevelopmental language impairments	$36,724	Q2.S.D	Yale University
Role of GABA interneurons in a genetic model of autism	$62,500	Q2.S.D	Yale University